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# ENVIRONMENTAL ASSESSMENT

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## I. PROJECT IDENTIFICATION

Project Name and Address: Town of Chesterfield  
17 Veterans Blvd., P.O. Box 95  
Chesterfield, IN 46017

SRF Project Number: WW06 25 48 01

Authorized Representative: Mr. Jack Taylor, President  
Town Council of Chesterfield

## II. PROJECT LOCATION

Chesterfield is in east central Madison County. The study area encompasses the existing corporate boundaries. The town's study area and 20-year service area are one and the same. The project area includes all streets west of Water Street and north and south of State Road 32 (see Figure 1).

## III. PROJECT NEED AND PURPOSE

Chesterfield's collection system includes combined and sanitary sewers, with two combined sewer overflow (CSO) outfalls and one lift station. To the east of Water Street, the collection system consists of sanitary sewers; to the west of Water Street the system consists of sanitary and combined sewers.

The collection system has a total of 35,707 feet of sanitary and combined sewers ranging in size from 8-inches to 36-inches and a total of 236 manholes (198 manholes 48-inches in diameter and 38 manholes 60-inches in diameter).

Since the town does not have a wastewater treatment plant, all wastewater flows by gravity to the Chesterfield Lift Station; the wastewater is then pumped to the Anderson wastewater treatment plant for treatment. Chesterfield also receives wastewater from the town of Daleville and the Mounds State Park and sends that wastewater to Anderson for treatment.

The two CSO outfalls are located along Chesterfield Branch (locally called Mill Creek), which roughly parallels Water Street 100 feet to the east. CSO 001 is located at the intersection of State Road 32 and the Mill Creek Bridge. CSO 002 is located approximately 500 feet south of CSO 001 along Chesterfield Branch. During heavy rains, the town

discharges mainly through CSO 002, releasing untreated sewage into Chesterfield Branch, a tributary of White River (see Figure 2).

The town submitted a CSO Long Term Control Plan to the Indiana Department of Environmental Management (IDEM) addressing both the separation of sewers on the west side and the elimination of the two CSOs. The IDEM's Wet Weather Section approved the town's CSO Long Term Control Plan on June 19, 2006.

#### **IV. PROJECT DESCRIPTION**

The proposed project includes constructing an entirely new sanitary sewer system west of Water Street and disconnecting all homes from the combined sewers and onto the new sanitary sewers. The existing combined sewers will be converted to storm sewers, which will change the two CSO outfalls to storm water outfalls.

The proposed sewer separation project includes:

- A. Installing approximately 18,435 feet of 8-inch polyvinyl chloride (PVC) for sanitary sewers.
- B. Installing approximately 6,666 feet of 10-inch PVC sanitary sewer.
- C. Installing approximately ninety-six 48-inch diameter manholes.
- D. Slipling approximately 4,568 feet of existing combined sewers that will be converted to storm sewers.
- E. Installing approximately 17,700 feet of 6-inch service laterals.
- F. Installing approximately 900 feet of 12-inch reinforced concrete pipe (RCP) for storm sewers.
- G. Replacing approximately 20,000 square yards of asphalt surface.

Based on 2005 flow data obtained from Anderson, completion of this proposed sewer separation project should reduce the wastewater flow to Anderson by approximately 42 million gallons per year. Chesterfield's future average daily flow is anticipated to be approximately 745,000 gallons per day.

## V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

### A. Selected Plan Estimated Cost Summary

Items	Costs
1. 8-inch PVC Sanitary Sewer	\$1,375,375
2. 10-inch PVC Sanitary Sewer	599,940
3. 48-inch Diameter Manholes	432,000
4. Sliplining	91,360
5. Sanitary Service Laterals	531,000
6. 12-inch RCP Storm Sewer	112,500
7. Asphalt Surface Replacement	700,000
8. SR. 32 Sewer Separation	800,000
<b>Subtotal Construction Costs</b>	<b>\$4,642,175</b>
Contingencies	464,225
<b>Total Estimated Construction Costs</b>	<b>\$5,106,400</b>
<b>Non-Construction Costs</b>	
Administrative, Legal, Financial, Bond Counsel	\$ 110,000
* Land & Rights of Way Acquisition	20,000
Engineering Design	350,000
Engineering Construction	130,000
Soils Boring/Geotechnical	20,000
Project Inspection	120,000
Start-up	10,000
<b>Non-Construction Subtotal</b>	<b>760,000</b>
<b>Total Estimated Project Cost</b>	<b>\$5,866,400</b>

\* This cost is ineligible for funding through the State Revolving Fund (SRF) Loan Program.

B. Chesterfield will borrow \$5,846,400 from the State Revolving Fund (SRF) for a 20-year term at a fixed interest rate to be determined at loan closing. SRF interest rates are adjusted quarterly and will be equal to or lower than AAA open-market rates. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

## VI. DESCRIPTION OF EVALUATED ALTERNATIVES

There were three alternatives considered for this project. These included: No action, performing a partial sewer separation, and performing a full sewer separation.

A. No Action Alternative: The no action alternative was rejected, since the town would still have two CSO outfalls discharging sewage into nearby ditches and streams during heavy rain events.

- B. Partial Separation: This alternative would still allow at least one CSO outfall to remain in order to prevent surcharging of the town's sewer system on the west side. Although this alternative would be less expensive now, the town would have to invest more money later to accomplish complete sewer separation on the west side.
- C. Complete Separation: This alternative will result in a 100 percent separation of sewers, as well as eliminate both CSOs. In addition, this alternative will greatly reduce wastewater flows being pumped to Anderson by approximately 70 percent. **This was the selected alternative, based on cost.**

## VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

### A. Direct Impacts of Construction and Operation

Disturbed and Undisturbed Areas: The project will take place in existing streets and other areas previously disturbed by installation of combined sewers and other utilities.

Structural Resources: The project will not affect these resources. The SRF's Finding, pursuant to Section 106 of the National Historic Preservation Act, is: "no historic properties affected."

Biota: The project's construction and operation will not negatively impact state or federally listed threatened or endangered species.

Prime Farmland: The proposed project will not cause a conversion of prime farmland.

Wetlands (see Figure 3): The project will not affect any wetlands.

100-Year Floodplain (see Figure 3): The proposed project will not be constructed within the 100-year floodplain.

Surface Waters: There will be no stream crossings associated with the proposed project.

Groundwater: It is anticipated that only normal groundwater control measures will be required for the construction of this project. The proposed project will not affect drinking water supplies.

Air Quality: Construction will create dust and noise. No odors are anticipated from the new sewer system.

Open Space and Recreational Opportunities: The proposed project's construction and operation will neither create nor destroy open space and recreational opportunities.

The project will not affect National Natural Landmarks or the Lake Michigan Coastal Zone.

## **B. Indirect Impacts**

The town's PER states: *Chesterfield, through the authority of its council, will ensure that future development, as well as future collection system or treatment works projects connecting to SRF-funded facilities will not adversely impact wetlands, archaeological/historical/structural resources, or other sensitive environmental resources. The town will require new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, IDEM and other environmental review authorities.*

## **C. Comments from Environmental Review Authorities**

The Natural Resources Conservation Service (NRCS), in correspondence dated May 24, 2005, stated: *The proposed project to construct a new sanitary sewer collection system in the Town of Chesterfield, Madison County, Indiana, as referred to in your letter dated May 3, 2005, will not cause a conversion of prime farmland.*

The U.S. Fish and Wildlife Service stated in correspondence dated May 31, 2005: *According to your letter the proposed project includes construction of a new sanitary sewer collection system and elimination of all CSO discharge points to the White River. The project will improve the water quality of the White River by eliminating a periodic source of untreated or partially treated sewage. To minimize construction impacts on stream channels and riparian habitat we recommend the following design features:*

- 1. Construct the new sewer line along Chesterfield Branch landward of the existing line to preserve the stream's riparian buffer. NOTE: There is no sewer line being installed along the Chesterfield Branch as a part of the proposed project.*
- 2. If new discharge points are required, locate them to minimize stream bank disturbance and removal of woody riparian vegetation.*

*Endangered Species: The proposed project is within the range of the federally endangered Indiana bat (Myotis sodalis) and federally threatened bald eagle (Haliaeetus leucocephalus). The proposed project is not likely to adversely affect these listed species.*

The Indiana Department of Natural Resources Environmental Unit stated in correspondence dated May 5, 2006: *Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.*

*The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.*

*Fish, wildlife, and botanical resource losses as a result of this project should be minimal.*

The State Historic Preservation Officer, in correspondence dated June 15, 2005, stated: *Based upon the documentation available to the staff of the Indiana SHPO, we have not identified any archaeological resources listed in or eligible for inclusion in the National Register of Historic Places within the probable area of potential effects.*

*This identification is subject to the project activities remaining within areas disturbed by previous construction.*

*Also, be advised that if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days.*

*In regard to buildings and structures, we have identified the following properties listed in the National Register of Historic Places within the probable area of potential effects:*

*The Chesterfield Spiritualist Camp District (Site #095-409-51001 per the Madison County Interim Report) was listed on July 17, 2002.*

*George Makepeace House at 5 West Main Street (Site #095-409-51002) was listed on March 21, 1985.*

*However, based on the information provided to our office, we believe that there will not be any alterations to the characteristics of the above identified historic properties qualifying them for inclusion in or eligibility for the National Register (see 36 C.F.R. § 800.16[i]).*

*Therefore, we concur with the Town of Chesterfield's April 21, 2005, finding that there are no historic buildings, structures, districts, objects, or archaeological resources within the area of potential effects that will be affected by the above indicated project.*

## **VIII. MITIGATION MEASURES**

The town did not list mitigation measures in its PER.

## **IX. PUBLIC PARTICIPATION**

A properly noticed public hearing was conducted on June 6, 2005 at 7 p.m. at the Chesterfield Government Center.